IN THE CLAIMS

1. (Currently Amended) A solid-state crossbar switch for transmitting data traffic, comprising:

a first number of input ports, each input port operable to receive DSL data from a data switch;

a second number of output ports, each output port capable of being coupled to a customer premise equipment (CPE) device; ~~and~~

a third number of 1 x N solid-state analog switches, each 1 x N solid-state analog switch operable to couple one of the input ports with N output ports; and

a catcher port coupled to each output port, wherein the catcher port is operable to monitor each output port to detect an active connection of a CPE device to one of the output ports and form an active connection with one of the output ports to alleviate a bad cluster.

2. (Original) The crossbar switch of Claim 1, wherein each input port is coupled to one of the 1 x N solid-state analog switches.

3. (Original) The crossbar switch of Claim 1, wherein the second number of output ports is greater than N.

4. (Original) The crossbar switch of Claim 1, further comprising a sweeper port coupled to each output port, wherein the sweeper port is operable to monitor each output port to detect an active connection of a CPE device to one of the output ports.

5. (Original) The crossbar switch of Claim 4, wherein the first number is twenty-three.

6. (Canceled)

7. (Currently Amended) The crossbar switch of Claim 1~~Claim 6~~, wherein the first number is twenty-two.

8. (Canceled)

9. (Currently Amended) The crossbar switch of Claim 1~~Claim 8~~, wherein the first number is twenty-three.

10. (Original) The crossbar switch of Claim 1, wherein the first number is twenty-four.

11. (Original) The crossbar switch of Claim 1, wherein the second number is ninety-six.

12. (Original) The crossbar switch of Claim 1, wherein N is approximately between twelve and thirty-two.

13. (Original) The crossbar switch of Claim 1, wherein N is sixteen.

14. (Original) The crossbar switch of Claim 1, wherein N is twenty-four.

15. (Original) A solid-state crossbar switch for transmitting data traffic, comprising:

a first number of input ports, each input port operable to receive DSL data from a data switch;

a second number of output ports, each output port capable of being coupled to a customer premise equipment (CPE) device;

a first number of solid-state analog switches, each solid-state analog switch operable to couple one of the input ports with each output port; and

a sweeper port coupled to each output port, wherein the sweeper port is operable to monitor each output port to detect an active connection of a CPE device to one of the output ports.

16. (Original) The crossbar switch of Claim 15, wherein the first number is twenty-three.

17. (Original) The crossbar switch of Claim 15, wherein the second number is ninety-six.

18. (Currently Amended) A method for transmitting DSL data between a data switch and a CPE device using a solid-state crossbar switch, comprising:

receiving DSL data from the data switch at a first number of input ports;

receiving the DSL data from the input ports at a second number of 1 x N solid-state analog switches, wherein each 1 x N solid-state analog switch comprises N outlets;

switching the DSL data received at each analog switch to an outlet of each analog switch; ~~and~~

receiving the switched DSL data at a third number of output ports, each output port capable of being coupled to a CPE device; and

monitoring each output port to detect an active connection of a CPE device to one of the output ports using a sweeper port, wherein the sweeper port is coupled to each output port.

19. (Original) The method of Claim 18, wherein each input port is coupled to one of the analog switches.

20. (Original) The method of Claim 18, wherein the third number of output ports is greater than N.

21. (Original) The method of Claim 18, wherein the first number is twenty-four.

22. (Original) The method of Claim 18, wherein the third number is ninety-six.

23. (Original) The method of Claim 18, wherein N is approximately between twelve and thirty-two.

24. (Canceled)

25. (Currently Amended) The method of Claim 18~~Claim 24~~, wherein the first number is twenty-three.

26. (Canceled)

27. (Currently Amended) The method of Claim 18~~Claim 24~~, wherein the first number is twenty-two.

28. (Original) The method of Claim 18, further comprising monitoring each output port to detect an active connection of a CPE device to one of the output ports and forming an active connection with one of the output ports to alleviate a bad cluster using a catcher port, wherein the catcher port is coupled to each output port.

29. (Original) The method of Claim 28, wherein the first number is twenty-three.

30. (Currently Amended) An apparatus for transmitting DSL data between a data switch and a CPE device using a solid-state crossbar switch, comprising:

means for receiving DSL data from the data switch at a first number of input ports;

means for receiving the DSL data from the input ports at a second number of 1 x N solid-state analog switches, wherein each 1 x N solid-state analog switch comprises N outlets;

means for switching the DSL data received at each analog switch to an outlet of each analog switch; ~~and~~

means for receiving the switched DSL data at a third number of output ports, each output port capable of being coupled to a CPE device; and

means for monitoring each output port to detect an active connection of a CPE device to one of the output ports using a sweeper port, wherein the sweeper port is coupled to each output port.

31. (Canceled)

32. (Original) The apparatus of Claim 30, further comprising means for monitoring each output port to detect an active connection of a CPE device to one of the output ports and means for forming an active connection with one of the output ports to alleviate a bad cluster using a catcher port, wherein the catcher port is coupled to each output port.

33. (Currently Amended) Logic encoded in media for transmitting DSL data between a data switch and a CPE device using a solid-state crossbar switch, the logic operable to perform the following steps:

receive DSL data from the data switch at a first number of input ports;

receive the DSL data from the input ports at a second number of 1 x N solid-state analog switches, wherein each 1 x N solid-state analog switch comprises N outlets;

switch the DSL data received at each analog switch to an outlet of each analog switch; ~~and~~

receive the switched DSL data at a third number of output ports, each output port capable of being coupled to a CPE device; and

monitor each output port to detect an active connection of a CPE device to one of the output ports using a sweeper port, wherein the sweeper port is coupled to each output port.

34. (Canceled)

35. (Original) The logic encoded in media of Claim 33, wherein the logic is further operable to monitor each output port to detect an active connection of a CPE device to one of the output ports and form an active connection with one of the output ports to alleviate a bad cluster using a catcher port, wherein the catcher port is coupled to each output port.

36. (Currently Amended) A crossbar switch for transmitting data traffic, comprising:

a first number of input ports, each input port operable to receive data from a data switch;

a second number of output ports, each output port capable of being coupled to a customer premise equipment (CPE) device; ~~and~~

a third number of 1 x N analog switches, each 1 x N analog switch operable to couple one of the input ports with N output ports, wherein N is less than the second number; and

a sweeper port coupled to each output port, wherein the sweeper port is operable to monitor each output port to detect an active connection of a CPE device to one of the output ports.

37. (Original) The crossbar switch of Claim 36, wherein the first number is twenty-four.

38. (Original) The crossbar switch of Claim 36, wherein the second number is ninety-six.

39. (Original) The crossbar switch of Claim 36, wherein N is sixteen.

40. (Currently Amended) A method for transmitting data between a data switch and a CPE device using a crossbar switch, comprising:

receiving data from the data switch at a first number of input ports;

receiving the data from the input ports at a second number of 1 x N analog switches, wherein each 1 x N analog switch comprises N outlets;

switching the data received at each analog switch to an outlet of each analog switch; ~~and~~

receiving the switched data at a third number of output ports, each output port capable of being coupled to a CPE device, wherein the third number is greater than N; and

monitoring each output port to detect an active connection of a CPE device to one of the output ports using a sweeper port, wherein the sweeper port is coupled to each output port.

41. (Original) The method of Claim 40, wherein the first number is twenty-four.

42. (Original) The method of Claim 40, wherein the third number is ninety-six.

43. (Original) The method of Claim 40, wherein N is sixteen.

44. (Currently Amended) An apparatus for transmitting data between a data switch and a CPE device using a crossbar switch, comprising:

means for receiving data from the data switch at a first number of input ports;

means for receiving the data from the input ports at a second number of 1 x N analog switches, wherein each 1 x N analog switch comprises N outlets;

means for switching the data received at each analog switch to an outlet of each analog switch; ~~and~~

means for receiving the switched data at a third number of output ports, each output port capable of being coupled to a CPE device, wherein the third number is greater than N; and

means for monitoring each output port to detect an active connection of a CPE device to one of the output ports using a sweeper port, wherein the sweeper port is coupled to each output port.

45. (Currently Amended) Logic encoded in media for transmitting data between a data switch and a CPE device using a crossbar switch, the logic operable to perform the following steps:

receive data from the data switch at a first number of input ports;

receive the data from the input ports at a second number of 1 x N analog switches, wherein each 1 x N analog switch comprises N outlets;

switch the data received at each analog switch to an outlet of each analog switch; ~~and~~

receive the switched data at a third number of output ports, each output port capable of being coupled to a CPE device, wherein the third number is greater than N; and

monitor each output port to detect an active connection of a CPE device to one of the output ports using a sweeper port, wherein the sweeper port is coupled to each output port.

46. (Original) A solid-state crossbar switch for transmitting DSL data traffic, comprising:

twenty-two input ports, each input port operable to receive DSL data from a data switch;

ninety-six output ports, each output port capable of being coupled to a CPE device; and

twenty-four 1 x 16 solid-state analog switches, each 1 x 16 solid-state analog switch operable to couple one of the input ports with sixteen output ports.

47. (Original) The crossbar switch of Claim 46, further comprising a sweeper port coupled to each output port, wherein the sweeper port is operable to monitor each output port to detect an active connection of a CPE device to one of the output ports.

48. (Original) The crossbar switch of Claim 46, further comprising a catcher port coupled to each output port, wherein the catcher port is operable to monitor each output port to detect an active connection of a CPE device to one of the output ports and form an active connection with one of the output ports to alleviate a bad cluster.

49. (Original) The crossbar switch of Claim 48, further comprising a sweeper port coupled to each output port, wherein the sweeper port is operable to monitor each output port to detect an active connection of a CPE device to one of the output ports.

50. (Previously Presented) The crossbar switch of Claim 1, further comprising a sweeper port coupled to each output port, wherein the sweeper port is operable to continuously cycle through each output port, establishing an active connection for a period of time to detect an active connection of a CPE device to one of the output ports.

51. (Currently Amended) The method of Claim 18, ~~further comprising monitoring each output port using a sweeper port coupled to each output port,~~ wherein the sweeper port ~~is operable to~~ continuously cycles ~~cycle~~ through each output port, establishing an active connection for a period of time to detect an active connection of a CPE device to one of the output ports.

52. (New) A method for transmitting DSL data between a data switch and a CPE device using a solid-state crossbar switch, comprising:

receiving DSL data from the data switch at a first number of input ports;

receiving the DSL data from the input ports at a second number of 1 x N solid-state analog switches, wherein each 1 x N solid-state analog switch comprises N outlets;

switching the DSL data received at each analog switch to an outlet of each analog switch; and

receiving the switched DSL data at a third number of output ports, each output port capable of being coupled to a CPE device; and

monitoring each output port to detect an active connection of a CPE device to one of the output ports and forming an active connection with one of the output ports to alleviate a bad cluster using a catcher port, wherein the catcher port is coupled to each output port.